



PUMA 5100LY

Powerful Turning Center with Y Axis Added

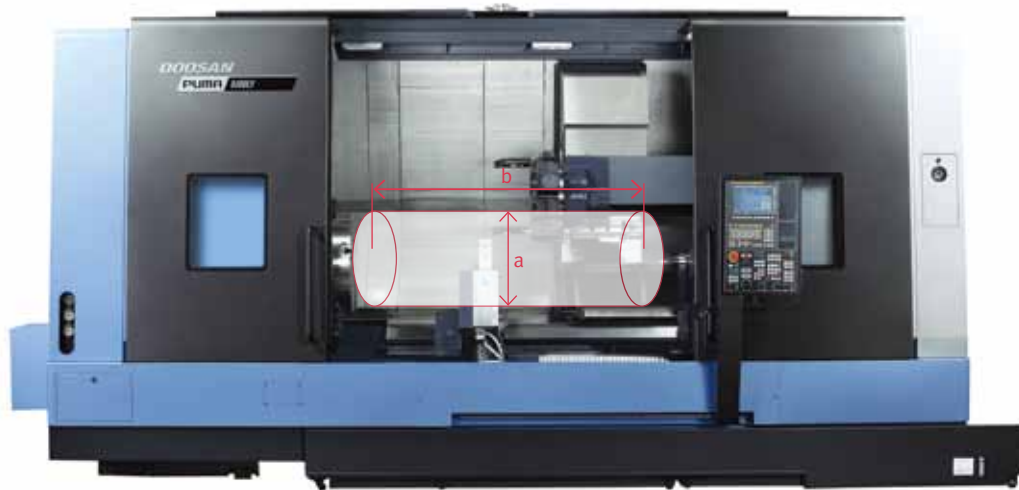


Doosan Machine Tools

Optimal Solutions for the Future

Multi-task Cutting for Medium to Large Works

Various types of machining including multi-face cutting and milling can be done for long and complicated shape parts of medium or large size.



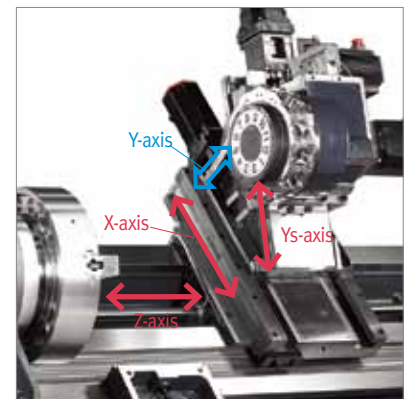
Unit: mm (inch)

	Y-axis	Max. turning dia. (a)	Max. work length (b)	Bar working
PUMA 5100LYA	150 (± 75) (5.9 (± 3.0))	550 (21.7)	2050 (80.7)	116.5 (4.6)
PUMA 5100LYB	150 (± 75) (5.9 (± 3.0))	550 (21.7)	2050 (80.7)	165.5 (6.5)

High performance y axis

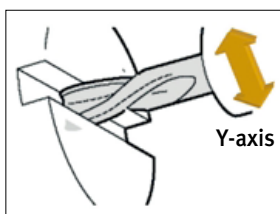
Y axis make rotary milling tools can be vertically (up / down) moved in the X axis or Z axis, enabling multi-task machining process that can not be carried out in 2-axes machine tools. Based on a 2-axes machine tools, virtual Y axis function is implemented by linear interpolation of double-slided X axis and Ys axis. This guarantees structural stability in multi-task machining process.

Y-axis Travel **150 (± 75) mm (5.9 (± 3.0) inch)**
Y-axis Rapid Traverse **10 m/min (393.7 ipm)**

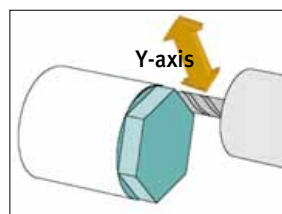


Complicated task can be carried out by single setting

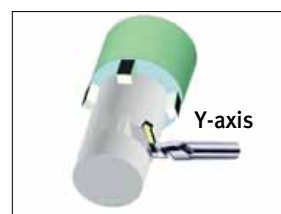
Synchronized feed control of the X, Y and Z axes and C axis function, Y / X axes circular interpolation enables complicated shaping processes with super high accuracy.



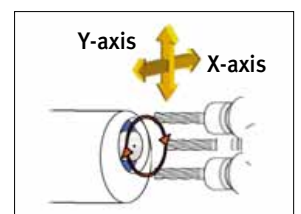
On-center face groove



Poly-side machining



Off-center side groove



Y & X axes circular interpolation

Main spindle



- Max. spindle speed
 - PUMA 5100LYA : 2000 r/min
 - PUMA 5100LYB : 1500 r/min
- Spindle Motor Power (30min)
 - PUMA 5100LYA : 37 kW (49.6 Hp)
 - PUMA 5100LYB : 45 kW (60.3 Hp)

Improved accuracy of c axis

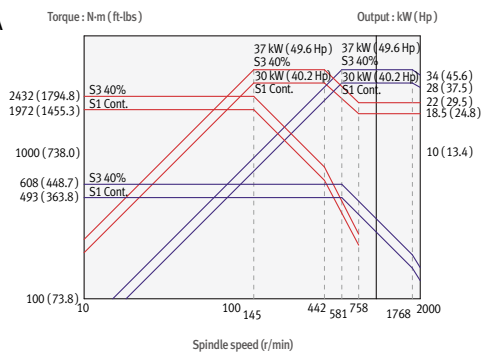
Positioning accuracy is further enhanced with high-resolution spindle position correction sensor.

2-stage gearbox for heavy cutting

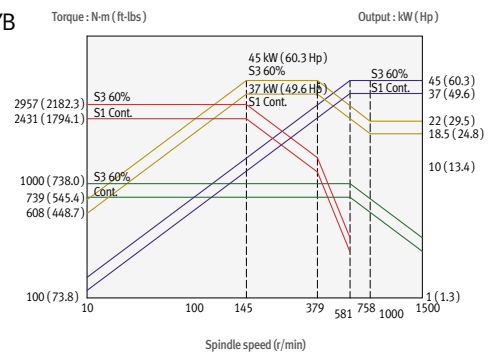


Main spindle power - torque diagram

PUMA 5100LYA



PUMA 5100LYB



Powerful servo-driven turret

The turret is servo-driven for more stable and powerful cutting.

Number of tool stations : 12 ea

Indexing time (1 station swivel) : 0.25 sec.

Rotary Tool

- BMT 75P
- Max. speed: 3000 r/min
- Air & oil lubrication system for improving heat dissipation
- Improved milling capacity (max. tap size : M30 x P3.5)



Programmable tailstock

Increased tailstock quill thrust and travel distance for medium & large works.

Tailstock quill thrust : 22200 N

Tailstock quill travel 140 mm (5.5 inch)

Tailstock center type: #MT6 (Live center)

#MT5 (Built-in dead center)

Machine Specifications

Description			Unit	PUMA 5100LYA	PUMA 5100LYB
Capacity	Swing over bed		mm (inch)	880 (34.6)	
	Swing over saddle		mm (inch)	820 (32.3)	
	Recom. turning diameter		mm (inch)	380 (15.0)	
	Max. turning diameter		mm (inch)	550 (21.7)	
	Max. turning length		mm (inch)	2050 (80.7)	2020 (79.5)
	Chuck size		inch	15	21
Travels	Travel distance	Bar working diameter	mm (inch)	116.5 (4.6)	165.5 (6.5)
		X-axis	mm (inch)	335 (60+275) (13.2 (2.4+10.8))	
		Z-axis	mm (inch)	2100 (82.7)	
		Y-axis	mm (inch)	150 (±75) (5.9 (3.0))	
Feedrates	Rapid traverse rate	X-axis	m/min (ipm)	20 (787.4)	
		Z-axis	m/min (ipm)	18 (708.7)	
		Y-axis	m/min (ipm)	10 (393.7)	
Main Spindle	Max. spindle speed		r/min	2000	1500
	Spindle nose		ASA	A2 #11	A1 #15
	Spindle bearing diameter (Front)		mm (inch)	180 (7.1)	240 (9.4)
	Spindle through hole		mm (inch)	132 (5.2)	181 (7.1)
	Min. spindle indexing angle (C-axis)		deg	0.001	
Turret	No. of tool stations		ea	12	
	OD tool size		mm (inch)	25 { 32 } (1.0 { 1.3 })	
	Max. boring bar size		mm (inch)	60 (2.4)	
	Turret indexing time (1 station swivel)		s	0.25	
Tail Stock	Max. rotary tool speed		r/min	3000	
	Quill diameter		mm (inch)	120 (4.7)	
	Quill bore taper		MT	#6	
Motors	Quill travel		mm (inch)	140 (5.5)	
	Main spindle motor power (30min./cont.)		kW (Hp)	37 / 30 (49.6 / 40.2)	45 / 37 (60.3 / 49.6)
	Rotary tool motor power		kW (Hp)	23 / 7.5 (30.8 / 10.1)	
Power Source	Coolant pump motor power		kW (Hp)	0.9 (1.2)	
	Electric power supply (rated capacity)		kVA	67.3	
Machine Dimensions	Height		mm (inch)	2850 (112.2)	
	Width		mm (inch)	5980 (235.4)	
	Depth		mm (inch)	2495 (98.2)	
	Weight		kg (lb)	13000 (28659.7)	
NC system				FANUC 32i	

{ } : Option

Standard Features

- Auto coolant supply system
- Auto lubricant supply system
- Hydraulic Chuck & Cylinder
- Hydraulic unit
- Leveling jack screws & plates
- Programmable tail stock
- Soft Jaw
- Work light

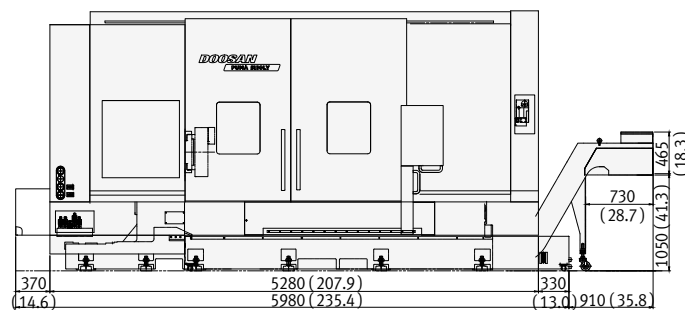
Optional Features

- Air blower
- Automatic front door
- Automatic power-off
- Chip conveyor & chip bucket
- Hydraulic steady rest (Auto / Manual)
- Oil skimmer
- Signal tower (yellow, red, green)
- Transformer

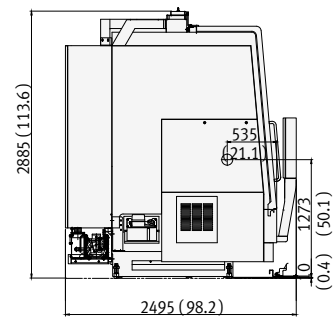
External Dimensions

Unit : mm (inch)

Front view



Side view



<http://www.doosaninfracore.com/machinetools/>

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